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THE CONSEQUENCES OF KELO: A FINANCIAL APPROACH

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THE CONSEQUENCES OF KELO: A FINANCIAL APPROACH

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
Economics

by
Curry Weston Hilton
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Accepted by:
Dr. Raymond D. Sauer, Committee Chair
Dr. Michael T. Maloney
Dr. Howard N. Bodenhorn

ABSTRACT

Municipal bonds corresponding to states that passed effective post-Kelo restrictions on eminent domain takings experienced an increase in yields. The high costs associated with property acquisitions in states with strong legislation deter economic development takings and contribute to the decreasing of municipal bond prices. The financial effect attributed to municipal bonds issued for the purpose of economic improvement completely exceeds the impact offered by industrial improvement and public improvement bonds. The Kelo decision itself reinforced the appropriateness of government takings for private gain. The outcome directly affected municipal bond yields, causing an increase in price because of the low cost involved with property seizures. A sample of 4403 municipal bonds, two legislation classification systems, and bond exposure in 42 of the 50 states ensures robustness in the analysis. The importance of an efficient amount of government intervention is critical to the health of society.

DEDICATION

It would be my utmost honor to dedicate the following thesis to my mother, Kimberly M. Hilton (a.k.a. Moms). The completion of this master's program in the entirety would not have been feasible without the unwavering support, she most graciously offers. I will be forever indebted to her for the constant sacrifices she makes, in order for me to fulfill my sometimes "irrational" life endeavors. Thank you for never losing faith in me (even though I gave you plenty of reason to) and always encouraging me to "push efficiency." I love you Moms...

I would also like to give a special thanks to Gena N. Bell and Emily J. Hilton (Emma) for their generous level of understanding throughout this experience. Their significant contribution to the overall cause and steadfast devotion is truly appreciated.

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CHAPTER ONE

INTRODUCTION

According to the Fifth Amendment, an individual may not “be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.” The purpose of the takings clause in the Fifth Amendment is to restrict how far and by what means a government entity can exercise its right to seize private property for public use. The public right to seize property is known as eminent domain. Eminent domain is formally defined as the power of the state to seize a citizen's private property, expropriate property, or rights in property for public use, without the owner's consent¹. The evolution of the interpretation of “public use” has changed over time and represented the most contentious disagreements over its use. The once narrow definition of “public use”, included takings that directly benefit the community such as highways, municipal buildings, and airports, has been transformed into an extensive understanding of the term which encompasses any takings that will increase social welfare. This transition is mirrored in the outcome of the controversial Supreme Court case, *Kelo v. City of New London*².

BACKGROUND INFORMATION:

During the late 1990's, the city of New London, Connecticut experienced slow economic growth and generated revenue less than the amount needed to cover costs. In order to stimulate the deteriorating economy and promote growth, the city initiated a

¹ USLaw.com, http://www.uslaw.com/us_law_dictionary/e/Eminent+Domain

² *Kelo v. City of New London*, 545 U.S. 469 (2005)

revival plan under the guidance of the New London Development Corporation (NLDC). The NLDC served as a private, non-profit intermediary between the city's interest and the public view. The NLDC was in charge of holding public hearings, acquiring property, and redistributing the seized private property to the most valued users. Part of the revival initiative included enticing Pfizer Corporation to locate its new research institution on the Thames River. To make the area more attractive and induce Pfizer Corporation to invest capital in New London, the NLDC proposed redeveloping an adjacent tract of land. The projected area, Fort Trumbull would serve as a better complement to the neighboring research facility if it were redeveloped.

After Pfizer's investment commitment, the NLDC fulfilled its promise by disclosing the redevelopment plan to the public. The plan consisted of transforming the predominately middle to low income Fort Trumbull area, into a more modern facade including a luxury hotel, conference center, upscale residential and commercial properties, and a state park. The NLDC negotiated fair market acquisitions of all the properties except 15 residential tracts owned by 9 individuals. The NLDC was given the license to obtain the reluctant property owner's land by means of the city's eminent domain authority.

The lead plaintiff in the *Kelo v. City of New London* case, Susette Kelo, believed the seizure of her and her neighbor's properties violated the Takings Clause in the Fifth Amendment. According to Kelo, the city's actions unjustly expanded the intended meaning of "public use". The stubborn property owners argued their case against the city of New London at the state level in the Supreme Court of Connecticut. Kelo and the

other plaintiffs contended that the city circumvented the law to transfer property from private owners in Fort Trumbull to a private entity (NLDC), which was inconsistent with the original intent of the Takings Clause. The Supreme Court of Connecticut favored New London by offering the statement, “an economic development plan that the appropriate legislative authority rationally has determined will promote significant municipal economic development constitutes a valid public use for the exercise of the eminent domain power.”³

After pressure from the Institute for Justice on behalf of Kelo, the United States Supreme Court granted certiorari to decide the extent of limitations of the Fifth Amendment pertaining to private takings by municipalities for economic development. The Kelo petition, presented by the Institute for Justice, offers 3 supporting arguments, (I) The condemnation of petitioners’ homes for the sole purpose of economic development violates the public use requirement of the Fifth Amendment, (II) Even if this court holds that eminent domain for economic development is not categorically unconstitutional, these particular condemnations still do not constitute a public use, (III) The sky will not fall if this court rules in favor of petitioners, while a ruling affirming the Connecticut Supreme Court will open the flood gates⁴. Advocates of private property protection hoped the high court’s decision to hear the case would place some meaningful restrictions on eminent domain takings. The Kelo case was the first major eminent domain trial to be heard at the Supreme Court level since the Hawaii Housing Authority

³ *Kelo v. New London*, 843 A. 2d 500, 528 (Conn. 2004).

⁴ Brief of Petitioners, On Writ of Certiorari to the Supreme Court of Connecticut, No. 04-108

v. Midkiff⁵ case in 1984, which had greatly expanded the eminent domain authority and the definition of public use to include public benefit.

The Kelo case was argued on February 22, 2005 in front of only 7 of the 9 Supreme Court justices. 4 months later, the U.S. Supreme Court offered a 5-4 decision supporting the actions of New London. The majority opinion was endorsed by Justice John P. Stevens, Anthony Kennedy, David Souter, Ruth Bader Ginsburg, and Stephen Breyer. The majority opinion was based on prior precedent established by cases such as *Berman v. Parker*⁶ and *Hawaii Housing Authority v. Midkiff*.

The Berman case entailed a redevelopment plan targeting a blighted portion of Washington, D.C. Within the projected area, a local department store owner disputed the condemnation, stating that his store was not described as blighted. The U.S. Supreme Court refused to assess the specific claim of the plaintiff, deferring the decision to a more extensive ruling on the redevelopment plan in the entirety. The broad interpretation of the “public use” term in the Takings Clause was explicitly accepted by an undivided court:

“We do not sit to determine whether a particular housing project is or is not desirable. The concept of the public welfare is broad and inclusive... The values it represents are spiritual as well as physical, aesthetic as well as monetary. It is within the power of the legislature to determine that the community should be beautiful as well as healthy, spacious as well as clean, well-balanced as well as carefully patrolled. In the present case, the Congress and its authorized agencies have made determinations that take into account a wide variety of values. It is not for us to reappraise them. If those who govern the District of Columbia decide

⁵ *Hawaii Housing Authority v. Midkiff*, 467 U.S. 229 (1984).

⁶ *Berman v. Parker*, 348 U.S. 26 (1954)

that the Nation's Capital should be beautiful as well as sanitary, there is nothing in the Fifth Amendment that stands in the way"⁷

The outcome of the infamous Berman case restructured the definition of the "public use" clause to include "public purpose". The expanded meaning of "public use" derived from the Berman case served as a legal landmark for future cases pertaining to eminent domain such as *Hawaii Housing Authority v. Midkiff* and *Kelo v. City of New London*.

In 1984, the *Hawaii Housing Authority v. Midkiff* case was brought before the U.S. Supreme Court. In light of highly concentrated ownership on the island of Oahu, the Hawaii Housing Authority used eminent domain to redistribute land ownership. The reallocation would prevent oligopoly land ownership, maintain land prices, and promote public welfare. For public policy reasons, the Hawaii Housing Authority forced the sale of leased lands to ensure a more equitable division of property. The principle land owners were forced to relinquish their property to long-term lessees at fair market value. The plaintiff, Midkiff, argued that the entire burden of the Land Reform Act (1967) was incurred by the rightful property owners. In a unanimous ruling, the Supreme Court supported the Hawaii Housing Authority. The decision was based on the state's inalienable right to utilize policing power to ensure markets operate efficiently. The justices declared the land did not have to be put to a "public use" in order to qualify for eminent domain use. The determination implies judicial deference to the Hawaii Housing Authority or any acting legislature. Justice Sandra Day O'Connor concluded:

"In our system of government, legislatures are better able to assess what public purposes should be advanced by an exercise of the taking power... Thus, if a

⁷ *Berman v. Parker*, 348 U.S. 26 (1954) Id., at 33

legislature, state or federal, determines there are substantial reasons for an exercise of the taking power, courts must defer to its determination that the taking will serve a public use.”⁸

The ruling in favor of the Hawaii Housing Authority reaffirmed the Berman decision.

Based on the strength of the established precedent, Kelo’s negative outcome for the private property owners was anticipated. The majority opinion, written by Justice Stevens emphasized the importance of the long standing precedent, which served as the main contributor to the final decision. Although the concurring judges were adamant about their decision, they acknowledged the suffering induced by eminent domain takings. Justice Stevens also embraced the idea of individual states enacting legislation to further protect citizens from eminent domain exploitation: “We emphasize that nothing in our opinion precludes any State from placing further restrictions on its exercise of the taking power.”⁹

The dissenting opinion, written by Justice O’Connor demonstrated disbelief of the majority opinion’s conclusion. She presented evidence on the failure of the Supreme Court in determining explicit limitations on how far municipal takings can extend. This failure to establish limits makes all private property subject to “being taken and transferred to another private owner, so long as it might be upgraded.”¹⁰ She also states, “Under the banner of economic development, all private property is now vulnerable to being taken and transferred to another private owner, so long as it might be

⁸ *Hawaii Housing Authority v. Midkiff*, 467 U.S. 229 (1984) Id. at 244.

⁹ *Kelo v. City of New London*, 545 U.S. 469 (2005) Id.

¹⁰ *Kelo v. City of New London*, 545 U.S. 469 (2005) Id. At 2671 (O’Connor, J., dissenting).

upgraded-i.e., given to an owner who will use it in a way that the legislature deems more beneficial to the public-in the process.”¹¹

O’Connor explained the differences between the Kelo case and Berman and Midkiff cases. The Berman and Midkiff takings were consistent with the “Public Use Clause” because “the extraordinary, precondemnation use of the targeted property inflicted affirmative harm on society-in Berman through blight resulting from extreme poverty and in Midkiff through oligopoly resulting from extreme wealth.”¹² In both cases, the takings were deemed constitutional because the legislative entity mitigated harm by removing or redistributing property use.¹³ The takings performed by the legislative body in Berman and Midkiff were considered a direct public benefit even though the transfer was private-to-private.

On the other hand, the property acquired through means of eminent domain in New London was not blighted. The homes of Susette Kelo and Wilhelmina Dery were well-maintained and generated no social harm.¹⁴ O’Connor states, after Kelo nothing “is to prevent the State from replacing any Motel 6 with a Ritz-Carlton, any home with a shopping mall, or any farm with a factory.”¹⁵ The premise of the dissenting opinion explains how the majority decision moves way from “harmful property use” condemnation conclusions in Berman and Midkiff to a more extensive meaning of public use. O’Connor’s opinion states, “It holds that the sovereign may take private property currently put to ordinary private use, and give it over for new, ordinary private use, so

¹¹ *Kelo v. City of New London*, 545 U.S. 469 (2005) Id. At 494

¹² *Kelo v. City of New London*, 545 U.S. 469 (2005) Id. At 2674 (O’Connor, J., dissenting).

¹³ *Berman*, supra, at 28-29, 75 S. Ct. 98; *Midkiff*, supra, at 232, 104 S. Ct. 2321

¹⁴ *Kelo v. City of New London*, 545 U.S. 469 (2005) Id. At 2675 (O’Connor, J., dissenting).

¹⁵ *Kelo v. City of New London*, 545 U.S. 469 (2005) Id. At 2676 (O’Connor, J., dissenting).

long as the new use is predicted to generate some secondary benefit for the public-such as increased tax revenue, more jobs, maybe even esthetic pleasure.”¹⁶ According to this statement, the “public use” clause can be applied to any circumstance where benefit is received by transfer of property, rendering it useless. Eminent domain is not constrained by the new precedent established by the Kelo decision.

LEGISLATIVE RESPONSE TO KELO:

In the majority opinion, Justice Stevens encouraged states to provide further legislative limitations on takings allowed by municipalities. The political conflict induced by the Kelo decision and the call by Stevens to legislate has 43 states enacting some type of post-Kelo legislative reform.¹⁷ Table 1.1 provides the dates that states adopted eminent domain reforms after Kelo. (As of February 16, 2009)

Table 1.1: State Legislative Action Post-Kelo:

States:	Legislation Type:	Signed Law Date:	Voter Approved:
Alabama	SB 68	08/03/2005	
	HB 654	04/25/2006	
Alaska	HB 318	07/05/2006	
Arizona	Proposition 207	11/07/2006	
California	SB 53	09/29/2006	
	SB 1206	09/29/2006	
	SB 1210	09/29/2006	
	SB 1650	09/29/2006	
	SB 1809	09/29/2006	
Colorado	HB 1411	06/06/2006	
Connecticut	SB 167	06/25/2007	
Delaware	SB 217	07/21/2005	
Florida	HB 1567	05/11/2006	
	HJR 1569	05/04/2006	11/07/2006
Georgia	HB 1306	04/04/2006	

¹⁶ *Kelo v. City of New London*, 545 U.S. 469 (2005) Id. At 2676 (O’Connor, J., dissenting).

¹⁷ http://www.castlecoalition.org/index.php?option=com_content&task=view&id=510 (visited Feb. 16, 2009)

	HB 1313	04/04/2006	11/07/2006
Idaho	HB 555	03/21/2006	
Illinois	SB 3086	07/28/2006	
Indiana	HB 1010	03/24/2006	
Iowa	HF 2351	07/14/2351	
Kansas	SB 323	05/18/2006	
Kentucky	HB 508	03/28/2006	
Louisiana	HB 707	06/19/2006	09/30/2006
	SB 1	05/31/2006	09/30/2006
Maine	LB 1870	04/13/2006	
Maryland	SB 3	05/08/2007	
Michigan	SJR E	12/13/2005	11/07/2006
Minnesota	SF 2750	05/19/2006	
Missouri	HB 1944	07/13/2006	
Montana	SB 41	05/08/2007	
	SB 363	05/16/2007	
Nebraska	LB 924	04/13/2006	
Nevada	AB 102	05/23/2007	
New Hampshire	SB 287	06/23/2006	
	CACR 30	04/20/2006	11/07/2006
New Mexico	HB 393	04/03/2007	
	SB 401	04/03/2007	
North Carolina	HB 1965	08/10/2006	
North Dakota	Measure 2	11/07/2006	
	SB 2214	04/05/2007	
Ohio	SB 167	11/16/2005	
	SB 7	07/10/2007	
Oregon	Measure 39	11/07/2006	
Pennsylvania	HB 2054	05/04/2006	
	SB 881	05/04/2006	
Rhode Island	S2728A	07/02/2008	
South Carolina	SB 1031	06/14/2006	11/07/2006
South Dakota	HB 1080	03/17/2006	
Tennessee	HB 3450	06/05/2006	
	SB 3296	06/05/2006	
	HB 3700	06/27/2006	
Texas	SB 7	09/01/2005	
Utah	SB 117	03/21/2006	
	HB 365	03/20/2006	
Vermont	S 246	04/14/2006	
Virginia	HB 2954	04/04/2007	
	SB 781	04/04/2007	
	SB 1296	04/04/2007	
Washington	HB 1458	04/04/2007	

West Virginia	HB 4048	04/05/2006
Wisconsin	AB 657	03/30/2006
Wyoming	HB 124	02/28/2007

Source: Castle Coalition: Enacted Legislation since Kelo:

http://www.castlecoalition.org/index.php?option=com_content&task=view&id=510

Some states have followed through with the Justice Stevens' request to supplement state law by means of narrowing the definition of blight to encompass areas that only threaten public health and safety or abolishing eminent domain use for blight. Other states enacted insignificant post-Kelo reform for reasons such as negotiations, haste, or political pressure from lobbyists, lawyers, developers, and real estate agents. The residual states not falling into any of the two previous categories, elected to falter and not pass any form of legislature. In the time after Kelo, state eminent domain reform has been intensely evaluated by lawyers, economists, and other scholars. To capture alternative interpretations of these laws in the analysis, two classification methods are employed. The classification systems will be explained in more detail in Chapter 2.

RELATIONSHIP BETWEEN MUNI YIELDS AND EMINENT DOMAIN

Municipal bonds are issued by states or municipalities to generate revenue for numerous public projects. Bond traders who price municipal bonds are interested in two determinants, future tax expectations and non-revenue factors. Future tax expectations of municipalities play an essential role in the determination of municipal bond prices. Tax capacity is determined by multiplying the market value of each property within the city by the tax rate for the use of the property. The tax rate is the fee required from each property to collect the amount of dollars needed to operate public systems. If a municipality has a large tax capacity, they will be able to meet their debt obligations.

The smaller the city's tax capacity, the higher the default premium and the less likely to meet financial needs. Future tax expectations will not be explored in this study.

The other determinant of municipal bond prices and yields is non-revenue factors such as state legislation and other market conditions. A public policy such effective restrictions on eminent domain takings by municipalities contribute to the pricing of the municipal bond. This analysis will look at the pricing of municipal bonds in relationship to the consequences induced by Kelo and the state legislation passed thereafter. If a state passed effective post-Kelo reform, yields are predicted to rise because the cost incurred in the takings will rise significantly. If a state passes ineffective restrictions on eminent domain takings, the yields on municipal bonds within the state will decrease or not be affected.

STATEMENT OF PURPOSE:

The fundamental objective of this analysis is to better understand legislative eminent domain reforms induced by Kelo. It also attempts to decipher the many and complex motives pushing states to pass different degrees of meaningful reform. An extensive background investigation of the evolution of private property rights throughout the years in the United States will provide a sound foundation for a concentrated study on economic development takings.

Previous literature pertaining to the post-Kelo reaction is examined and utilized to supplement the study. Municipal bonds issued for the purpose of economic improvement, public improvement, and industrial improvement will be analyzed to determine the relationship between current bid yields and the effectiveness of post-Kelo

reform at the state level. Examples of each type of municipal bond purpose will be provided.

The municipal bond yields for states that passed effective post-Kelo reform are expected to rise between the measurement dates because of the high cost involved in the acquisition of private property. The increased protection of property rights will drive the price of the bond down and inversely cause the yield to go up. The municipal bond yields for states that passed ineffective post-Kelo reform are projected to fall because the difficulty to seize property is very low. The minimal cost to acquire land under ineffective reform inflates the price of the bond causing the yield to decrease. The yield analysis will add value to the importance of effective eminent domain legislation and provide further insight on the consequences provoked by Kelo.

CHAPTER TWO

LITERATURE REVIEW

CLASSIFICATION METHODS:

The Castle Coalition, a national grassroots property rights activism project initiated by the Institute for Justice, developed a classification system to evaluate the effectiveness of post-Kelo legislation on a state-by-state basis. The “50 State Report Card”¹⁸ published in June 2007, assigns each state a letter grade based on the quality of their reform. Each state’s legislation is appraised on the pivotal question, “How hard is it now for the government to take a person’s home or business and give it to someone else for private gain?”¹⁹ States that made it more difficult to condemn property receive A’s and B’s on the ordinal scale. States responding with relatively simple conditions receive a grade of C or D. States receiving F’s failed to pass any post-Kelo reform.

5 states were classified as passing grade “A-“and above forms of legislation (Florida, Michigan, New Mexico, North Dakota, and South Dakota). 16 states passed post-Kelo reform worthy of receiving a grade of “B-“to “B+” (Alabama, Arizona, Georgia, Indiana, Iowa, Kansas, Louisiana, Minnesota, Nevada, New Hampshire, Oregon, Pennsylvania, South Carolina, Utah, Virginia, and Wyoming). 6 states passed law reforms classified as “C” range material (Colorado, North Carolina, Texas, Washington, West Virginia, and Wisconsin). 15 states received a “D” rating for enacting law with limited strength (Alaska, California, Connecticut, Delaware, Idaho, Illinois,

¹⁸ Castle Coalition, www.castlecoalition.org/pdf/publications/report_card/50_State_Report.pdf

¹⁹ Castle Coalition, www.castlecoalition.org/pdf/publications/report_card/50_State_Report.pdf, pg. 4

Kentucky, Maine, Maryland, Missouri, Montana, Nebraska, Ohio, Tennessee, and Vermont). The remaining 8 states were assigned “F” grades for not enacting any type of post-Kelo reform (Arkansas, Hawaii, Massachusetts, Mississippi, New Jersey, New York, Oklahoma, and Rhode Island). There is no regional pattern present when allocating the state’s grades. The time elapsed from Kelo until each state’s legislation has no relevant effect on the classification.

Ilya Somin’s paper, “The Limits of Backlash: Assessing the Political Response to Kelo,” develops a classification system categorizing three types of legislature. Somin’s method is the most current source to date (January 2008), including any new state amendments after the Castle Coalition’s “50 State Report Card” in June 2007. State legislative reform is deemed “Effective” if it “provides property owners with at least some significant protection against economic development condemnations beyond that available under preexisting law.”²⁰ Also included within the limits of “effective” reform are laws that mitigate the probability of economic development takings even though they may not completely prohibit takings. Post-Kelo reform is considered “ineffective” if “they forbid economic development condemnations but essentially allow them to continue under another name, as in the case of states with broad definitions of “blight” that allow virtually any property to be declared blighted and condemned.”²¹ The last category, “no reform” includes all states that failed to alter their existing eminent domain law.

²⁰ Ilya Somin, “The Limits of Backlash: Assessing the Political Response to *Kelo*”, pg. 11

²¹ Ilya Somin, “The Limits of Backlash: Assessing the Political Response to *Kelo*”, pg. 12

According to Somin, 19 states are classified as passing effective legislation (Alabama, Arizona, Florida, Georgia, Idaho, Indiana, Kansas, Louisiana, Michigan, Minnesota, Nevada, New Hampshire, New Mexico, North Dakota, Oregon, Pennsylvania, South Dakota, Virginia, and Wyoming). The remaining 30 states excluding Utah (Passed legislation before Kelo) passed ineffective legislation (Alaska, Arkansas, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Iowa, Kentucky, Maine, Maryland, Massachusetts, Mississippi, Missouri, Montana, Nebraska, New Jersey, New York, North Carolina, Ohio, Oklahoma, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Washington, West Virginia, and Wisconsin). The state of Utah passed effective legislation before the Kelo decision was offered. Utah will be included as a “1” in the analysis. The regional spatial distribution of states based on strength of legislation is relatively equal. No one specific region has a dominant share of states passing effective or ineffective post-Kelo legislation.

For the purposes of this paper, grades A+ to B- assigned by the Castle Coalition are coded as “1”, and grades C+ to F- are coded as “0”. Somin’s classification as “effective” will be assigned “1”. Somin’s classification as “ineffective” or “no reform” will be coded “0”. Table 2.1 illustrates the Castle Coalition’s sorting method and Ilya Somin’s classification system.

Table 2.1: State Classification Methods²²

State:	Castle Coalition Classification:	CC Variable Coding:	Somin’s Classification:	S Variable Coding:
Alabama	B+	1	Effective	1
Alaska	D	0	Ineffective	0

²² Ilya Somin, “The Limits of Backlash: Assessing the Political Response to *Kelo*”, pg. 14-15; Castle Coalition, www.castlecoalition.org/pdf/publications/report_card/50_State_Report.pdf, synopsis

Arizona	B+	1	Effective	1
Arkansas	F	0	No Reform	0
California	D-	0	Ineffective	0
Colorado	C	0	Ineffective	0
Connecticut	D	0	Ineffective	0
Delaware	D-	0	Ineffective	0
Florida	A	1	Effective	1
Georgia	B+	1	Effective	1
Hawaii	F	0	No Reform	0
Idaho	D+	0	Effective	1
Illinois	D+	0	Ineffective	0
Indiana	B	1	Effective	1
Iowa	B-	1	Ineffective	0
Kansas	B+	1	Effective	1
Kentucky	D+	0	Ineffective	0
Louisiana	B	1	Effective	1
Maine	D+	0	Ineffective	0
Maryland	D	0	Ineffective	0
Massachusetts	F	0	No Reform	0
Michigan	A-	1	Effective	1
Minnesota	B-	1	Effective	1
Mississippi	F	0	No Reform	0
Missouri	D	0	Ineffective	0
Montana	D	0	Ineffective	0
Nebraska	D+	0	Ineffective	0
Nevada	B+	1	Effective	1
New Hampshire	B+	1	Effective	1
New Jersey	F	0	No Reform	0
New Mexico	A-	1	Effective	1
New York	F	0	No Reform	0
North Carolina	C-	0	Ineffective	0
North Dakota	A	1	Effective	1
Ohio	D	0	Ineffective	0
Oklahoma	F	0	No Reform	0
Oregon	B+	1	Effective	1
Pennsylvania	B-	1	Effective	1
Rhode Island	F	0	Ineffective	0
South Carolina	B+	1	Ineffective	0
South Dakota	A	1	Effective	1
Tennessee	D-	0	Ineffective	0
Texas	C-	0	Ineffective	0

Utah	B	1	Enacted Prior Kelo	N/A
Vermont	D-	0	Ineffective	0
Virginia	B+	1	Effective	1
Washington	C-	0	No Reform	0
West Virginia	C-	0	Ineffective	0
Wisconsin	C+	0	Ineffective	0
Wyoming	B	1	Effective	1

Source: Ilya Somin, “The Limits of Backlash: Assessing the Political Response to Kelo”, pg. 14-15; Castle Coalition, www.castlecoalition.org/pdf/publications/report_card/50_State_Report.pdf , synopsis

The only discrepancies apparent in the two classification systems are three states, Idaho, Iowa, and South Carolina. Even though Utah’s legislation is pre-Kelo, it is included in both tests coded as “1”. The Castle Coalition awards the state of Idaho with a D+ grade because the state’s definition of “public use” is very weak. House Bill 555 leaves room for broad interpretation of public use and fails to prohibit strategic maneuvering of parties interested in economic development takings. Somin classifies Idaho’s post-Kelo reform as effective, bolstering his opinion by stating Idaho’s law “couples a ban on economic development condemnations with restrictions on the definition of blight, roughly speaking, restrict blight condemnations to areas that fit the intuitive layperson’s definition of the term.”²³

The Castle Coalition confers the state of Iowa a B- grade, explaining how the significant improvement from the existing eminent domain law further protects the rights of individual property owners. House File 2351 ensures a fair assessment of each piece of property within the potential acquisition, requiring 75% of the individual tracts be blighted for an entire purchase. Somin asserts, Iowa’s statute still allows prospective

²³ Ilya Somin, “The Limits of Backlash: Assessing the Political Response to *Kelo*”, pg. 35

economic developers to evade restrictions and continue participating in takings. Somin explains the extensive definition of blight in HF 2351 depends on “the definition of such terms as “deterioration” and “excessive and uncorrected deterioration of site”.²⁴ He classifies Iowa’s reform as ineffective. The divergence in opinions between the Castle Coalition and Somin comes down to the interpretation of the definition of blight.

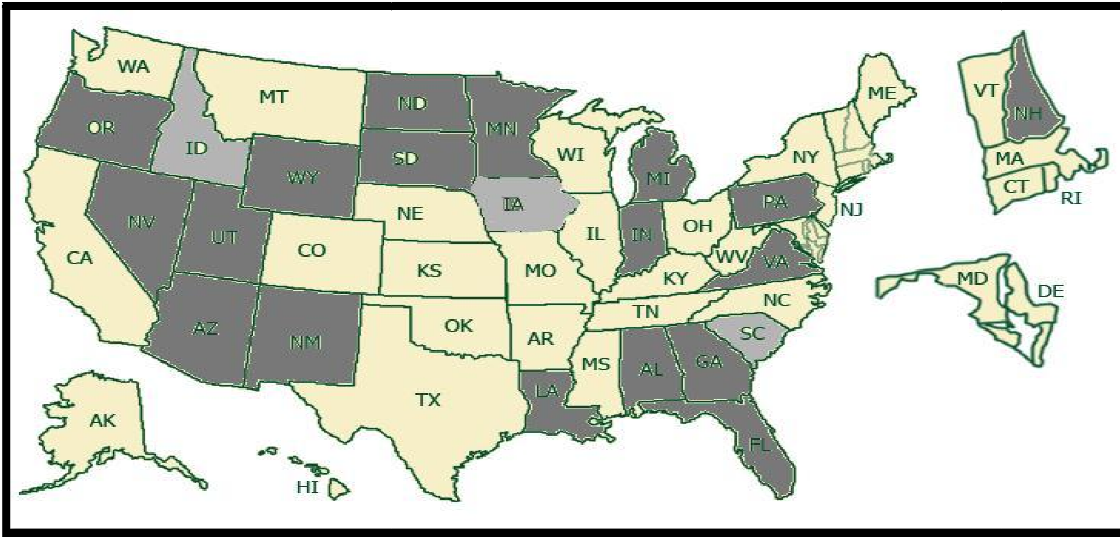
The last departure of judgment rests in the decision over South Carolina’s post-Kelo legislation. The Castle Coalition grants South Carolina with a grade of B+, stating the “constitutional amendment declares that blighted property must be a danger to public health and safety, effectively eliminating bogus blight.” Ilya Somin classifies South Carolina as promoting ineffective legislature after the Kelo decision. South Carolina was 1 of 10 states passing reform by means of popular referendum. Even though the realized outcome was initiated by popular referendum, the result was not sufficient for an effective classification according to Somin. He argues, “the new constitutional amendment adds nothing to the case law and leaves open the possibility that future court decisions will be able to reverse it in the absence of a clear textual statement in the state constitution to the contrary.”²⁵

Figure 2.1 shows the state classification system created by the Castle Coalition and Ilya Somin. The states with a dark grey background are considered to have passed effective legislation and states with a white background are classified as ineffective. The states with light grey shaded areas are the differences in the two classification methods employed in this study.

²⁴ Ilya Somin, “The Limits of Backlash: Assessing the Political Response to *Kelo*”, pg. 26

²⁵ Ilya Somin, “The Limits of Backlash: Assessing the Political Response to *Kelo*”, pg. 39-40

Figure 2.1: State Classification Allocation



Although both ordering techniques deviate away from each other on three occasions, the majority of the classifications are consistent. Both the Castle Coalition and Somin's systems offer substantial evidence supporting their claims for each state's post-Kelo reform

THE EVOLUTION OF PRIVATE PROPERTY:

Property, public or private is formally defined as any "article, item, or thing owned with the rights of possession, use, and enjoyment, and which the owner can bestow, collateralize, encumber, mortgage, sell, or transfer, and can exclude everyone else from it."²⁶ From the earliest known civilizations, private property is characterized by few contractual agreements and limited use of specific boundaries. The transition from a nomadic lifestyle to settlement dwelling, created by agriculture, led to the development of private property. The sense of ownership and the potential profit generated by land possession founded the initial phenomenon of property rights in the United States.

²⁶ BusinessDictionary.com, <http://www.businessdictionary.com/definition/property.html>

The essential principle at the axis of modern law explains how “property is the guardian of every other right”²⁷ According to Richard Epstein²⁸, “Our founding fathers had a keen appreciation of the central role of private property in social life, which is why they included the takings clause in the Fifth Amendment to the United States Constitution.”²⁹ The suppression of the Fifth Amendment and the apathy demonstrated by the United States Supreme Court during the New Deal era, allowed unrestricted government access to property needed to accomplish economic development and foster increased social welfare. The relevant neglect is present in the outcome of the Berman and Midkiff cases. Not until the Kelo case in 2005, has the public been fully aware of the danger imposed by the power of eminent domain and economic development takings.

“TAKINGS” AND THE STATE:

Epstein’s book, *Takings: Private Property and the Power of Eminent Domain*³⁰, explores nearly every facet of the policing power exhibited by the state in relationship to eminent domain and government takings. At the outset, Epstein establishes the importance of efficient government control by using the following pie charts.

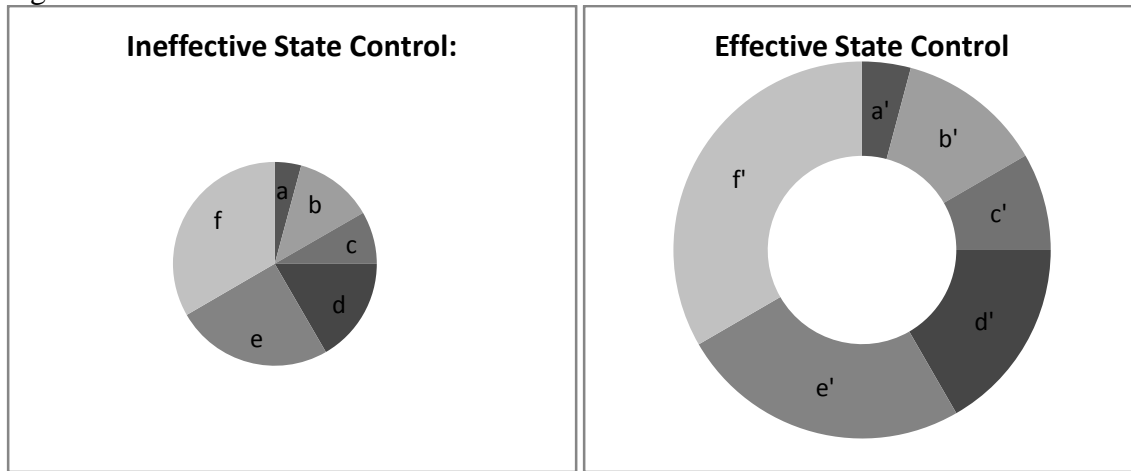
²⁷ Richard A. Epstein, *Supreme Neglect*, pg. 1

²⁸ Richard A. Epstein, James Parker Hall Professor of Law, University of Chicago

²⁹ Richard A. Epstein, *Supreme Neglect*, pg. 2

³⁰ Richard Epstein, *Takings: Private Property and the Power of Eminent Domain*, 1985

Figure 2.2: Ineffective/Effective State Control



The ineffective state control chart refers to an area where government intervention is at a minimum. Individual property owners, a thru f, have diminishing incentives to maximize their potential earnings by fully utilizing their endowment. If private property rights are not well established and reinforced by a strong central government, owners are hesitant to make necessary investments due to others threatening to take advantage of their hard work. In a political system with explicit and enforceable property rights, society can reap gains represented by the effective state control chart. The effective state control chart displays the external band surrounding the initial distribution of land with ineffective state control. Each property owner gains an additional amount of surplus a' thru f' from efficient government intervention. The government entity's primary purpose is to ensure society moves from the small pie chart to the chart including the external net benefit to society.

Epstein points out two present inefficiencies in the system of private property rights, “inability to control private aggression... and voluntary transactions cannot

generate the centralized power needed to combat private aggression.”³¹ The government’s answer to the existing failures, eminent domain use, mitigates free-rider issues, transaction costs, and holdouts by sellers. Epstein asserts government intervention is only necessary when confronted by “problems of aggression and provision of public goods.”³² Although the state may address market failure problems, it should be constrained by the function it provides.

The fundamental need for civil governance and the powers obtained by political entities results from the citizens presided over in society. Without the interaction of individuals and the self-interested forces provoking takings, the need for protection of property rights would be non-existent. Epstein declares, “Representative government begins with the premise that the state’s rights against its citizens are no greater than the sum of the rights of the individuals whom it benefits in any given transaction.”³³ The government’s sole objective is to exploit all possible gains for society. The authority of eminent domain should only be utilized when a citizen’s utility could be increased in comparison to their value before the transfer of property. The price received for the relinquishing of private property should meet or exceed the opportunity cost of giving up the possession. The takings clause in the Fifth Amendment states, “... nor shall private property be taken for public use, without just compensation.”

The emotions and physiological attachment accompanying ownership of a domain significantly contributes to the intangible value appraised by the title-holder. The true

³¹ Richard Epstein, *Takings: Private Property and the Power of Eminent Domain*, 1985, pg. 5

³² Richard Epstein, *Takings: Private Property and the Power of Eminent Domain*, 1985, pg. 5

³³ Richard Epstein, *Takings: Private Property and the Power of Eminent Domain*, 1985, pg. 331

value placed on the entitlement of a tract of land and dwelling residing within, completely exceeds the deemed worth assessed by a third party. The divergence in actual value observed by two evaluators prompts a controversial question, “How can any individual property owner be truly compensated for being displaced from a place they call home?”

According to Epstein, the most optimal compensation would “leave the individual owner in a position of indifference between the taking by the government and retention of the property.”³⁴ Another approach to “just compensation” is allow the market to determine a price through bargaining between the seller and the buyer. The relevant failure with this system lies at the foundation of modern game theory. Presume the seller places a value of β on their property and the buyer is willing to purchase the property for α . This is a game of asymmetric information where the valuation of both opposing sides is unknown. If the buyer is willing to accept the seller’s offer, β , then the seller is hesitant to sell because he has incentive to holdout for a higher payoff. The outcome resulting in this game is inefficient due to the non-agreement realized. Overall the central theme regarding compensation for takings is extremely convoluted and fragile.

PUBLIC USE:

The judicial result of the Berman and Midkiff cases expanded the public use term within the eminent domain clause to include any taking for public purpose or general social advancement. Based on the precedent established before Kelo, Bruce Ackerman pronounces “any state purpose otherwise constitutional should qualify as sufficiently

³⁴ Richard Epstein, *Takings: Private Property and the Power of Eminent Domain*, 1985, pg. 182

‘public’ to justify a taking.”³⁵ When evaluating the public use doctrine, Epstein asks the question, “Who gets the surplus?” For example³⁶, let’s say there are 25 people in the society and 1 central presiding body. If the government seizes a citizens’ private property for building a community center and realizes an increase in gross surplus of 1000 utils, who receives the surplus and how is it distributed? Firstly, the citizen whose land was acquired needs to be justly compensated (200 utils). Then, the cost of procurement and operation of the state needs to be satisfied (300 utils). The net surplus received by the society is 500 utils. In order for the state to remain in good standing and act for the benefit of society, the residual utility should be allocated by imposing symmetry. Each person in society should receive on average 20 utils of the remaining surplus for their contribution to the state. Now let’s assume the transfer of private property by use of eminent domain goes to a real estate developer, such as the NLDC. Holding all other constraints *ceteris paribus*, how does the allocation of surplus differ from the initial scenario? Well, the gross surplus of 1000 utils will directly go to the real estate developer. After the former owner of property is compensated, the net surplus of 600 utils is enjoyed by the private development corporation.

The previous example enlightens the astounding disparity between the definitions of public use and public purpose. A true public use definition is consistent with the situation where surplus is shared by society. Interpreting public use as public purpose allows for transfers of private property within the community to private firms with

³⁵ Bruce Ackerman, *Private Property and the Constitution* (1977)

³⁶ The example is a variation of one of Richard Epstein’s illustrations in *Takings*

intentions of profit maximization. The wealth gain realized through a private-to-private transaction is not enjoyed by citizens of the society.

GOVERNMENT INCENTIVES:

The relevant question at hand is why does the state not regulate against private-to-private transfers of property, knowing the detrimental public effects ensued? The incentives of the government are not aligned with the total wellbeing of its citizens if the distribution of additional surplus is not properly allocated. The objective function of the state is to provide adequate protection of its citizen's rights and operate solely for the purpose of optimizing the welfare of society. Government revenue is generated by means of fiscal policy and payment from citizens for illegal infractions. The income earned by these two forms should be for the purpose of maintaining the sustainability of the state. Any returns exceeding necessary costs should be redistributed evenly among the contributing citizens. What factors encourage government entities to operate like a corporation and strive to maximize profit regardless of the cost?

The answer to the previous question is quite obvious; it all comes down to money, population density, and power. A significant government deficit could be a potential reason for the takings of private property by eminent domain. A state confronted with expenses surpassing the capital inflow is inclined to operate in a dishonest manner to maintain political power. Population density also brings up the issue of holdout. Holdout is more likely when the number of people per acre increases. The state would be inclined to abuse eminent domain when population patterns are quite dense. It is not a surprise that the state of New York has not passed any reform post-Kelo. Power in the wrong

political hands can present a serious problem to the welfare of the state. Corruption within governing bodies is always an influencing factor for unconstitutional acts, when the potential for capital gain is relevant. Private monetary kickbacks from real estate developers and corporations also entice political officials to engage in unjust takings.

The governing body of the city of New London supported the takings in the Fort Trumbull area by explaining how much public benefit would rise due to an increase in the tax base. The proposed economic development plan supplanting the former resident homes would produce a quite substantial amount of tax revenue for the city of New London. The intentions of the city are not consistent with the theory representing a government's responsibility to its citizens. New London did not have legitimate grounds to displace non-blighted residential homes and businesses with more fashionable structures to augment their financial status. The cost incurred by the dwellers of Fort Trumbull exceeded the public gain garnered from the eminent domain acquisition. The ruling may be deemed a public purpose by the U.S. Supreme Court, but it does not qualify as a public use. The surplus present after the seizure should be reallocated among the citizens, in order to make everyone at least as well off as before the event. This is not the case in the result decided in *Kelo v. City of New London*. The existing surplus is attained by the city and the private development corporation

CHAPTER THREE

METHODOLOGY

SAMPLE DESCRIPTION:

The sample examined in this study comes from a population of bonds included in the Bloomberg Professional financial database. Specifically, the sample is described as bonds issued by municipalities for the purpose of economic improvement, public improvement, and industrial improvement. The constraints imposed on the population to derive the sample are as follows:

Bloomberg Search Criteria:

1. The bond has to be issued by a municipality within the United States including Alaska and Hawaii
2. The municipal bond has to be offered for the function of generating capital for economic improvement, public improvement, and industrial improvement
3. The issue date of the municipal bond has to fall in the range of 06/28/1984 – 01/01/2005
4. The maturity date of the municipal bond has to fall in the range of 08/01/2008 – 01/01/2027
5. The selected municipal bonds are not bounded by coupon payment limits (0 - ∞)

Table 3.1 illustrates the summary statistics regarding the selected municipal bonds and the classification allocation.

Table 3.1: Sample Description

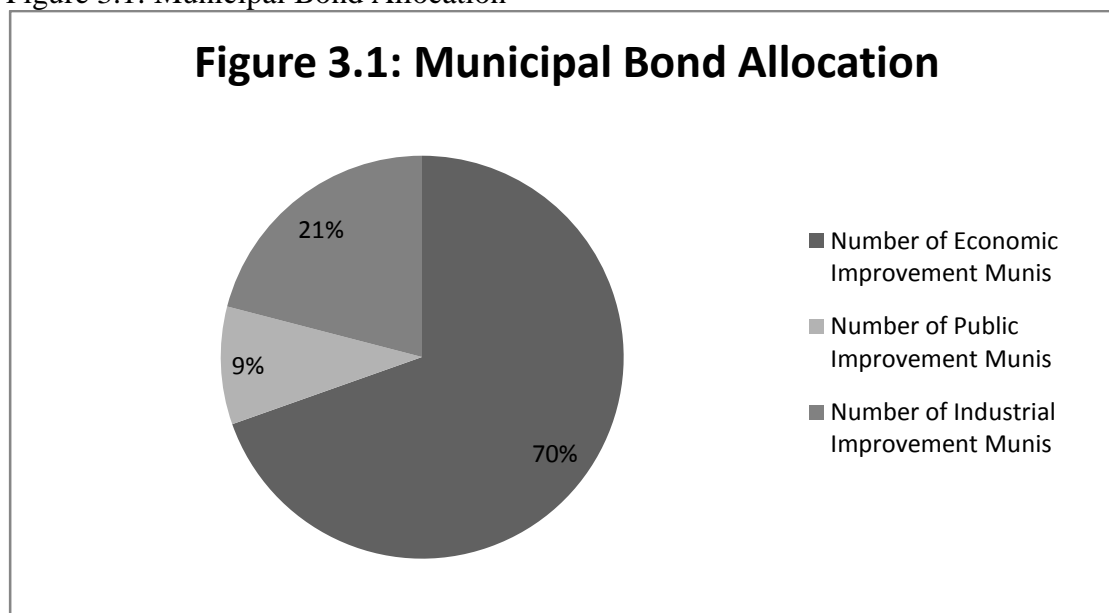
Variables	Count	Mean	Std. Dev.	Skewness	Range
Number of Muni's	4403	n/a	n/a	n/a	n/a
Number of Muni's (Economic Impt.)	3064	n/a	n/a	n/a	n/a
Number of Muni's (Industrial Impt.)	922	n/a	n/a	n/a	n/a
Number of Muni's (Public Impt.)	417	n/a	n/a	n/a	n/a
Issue Date	n/a	n/a	n/a	n/a	06/28/1984 - 01/01/2005
Maturity Date	n/a	n/a	n/a	n/a	08/01/2008 - 01/01/2027
Dummy Variable (Somin) = 0	3244	n/a	n/a	n/a	n/a
Dummy Variable (Somin) = 1	1159	n/a	n/a	n/a	n/a

Dummy Variable (CC) = 0	3210	n/a	n/a	n/a	n/a
Dummy Variable (CC) = 1	1193	n/a	n/a	n/a	n/a

Source: Bloomberg Professional

Figure 3.1 shows the distribution of types of municipal bonds (economic improvement, industrial improvement, and public improvement). The percentage of economic improvement municipal bonds significantly outweighs the other two types. The sample will be evaluated in the aggregate and by type.

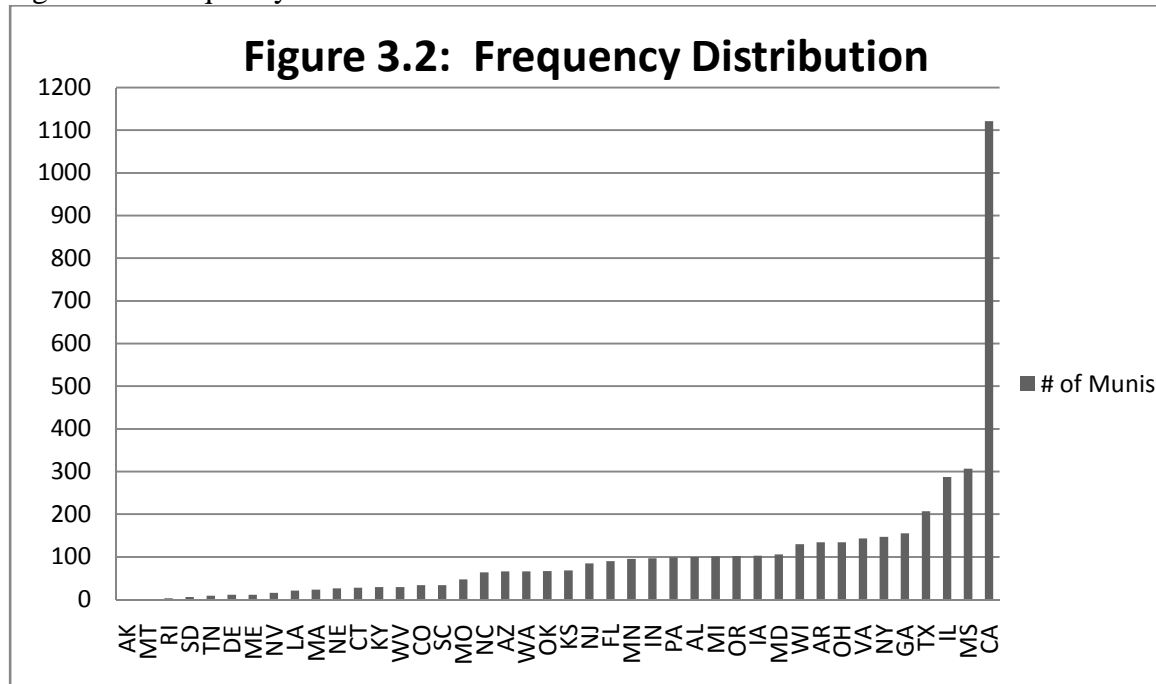
Figure 3.1: Municipal Bond Allocation



The sample includes 42 of the 50 states. Of the 42 states, the allocation of the number of municipal bonds in each one is depicted in Figure 3.2. The top 5 states with the most observations in the sample are California, Illinois, Mississippi, Texas, and Georgia. The states with the fewest observations are Alaska, Montana, Rhode Island, South Dakota, and Tennessee. The 8 states that are not included in this analysis are

Hawaii, Idaho, North Dakota, Utah, Vermont, Wyoming, New Mexico, and New Hampshire.

Figure 3.2: Frequency Distribution



The sample data obtained from Bloomberg Professional is time series municipal bond yields starting on 1/7/2005 and continuing weekly until 7/11/2008. The yields are always reported on Fridays. The current yields correspond to each municipal bond selected in the sample. Statistics also gathered for each municipal bond CUSIP include, coupon payment rates, issue date, maturity date, state code, municipal purpose, and municipal region. In addition to the data collected on municipal bonds, a dummy variable will be defined for the effectiveness of post-Kelo legislation corresponding to each state.

The entire sample will be divided into a treatment group and a control group. The treatment group will consist of any municipal bond issued in a state categorized as

passing effective post-Kelo legislation. The control group will consist of any municipal bond issued in a state classified as passing ineffective post-Kelo legislation.

MUNICIPAL BOND PURPOSES:

This section expands on the reasons why municipal bonds are issued and what activities qualify as economic, industrial, and public improvements. According to the Municipal Securities Rulemaking Board (MSRB), “municipal bonds are issued by states, counties, cities or their agencies to finance public-purpose projects ... schools, roads, bridges, utilities, affordable housing, airports, hospitals, and other public facilities and programs.”³⁷ In order to generate money for financing development activity, bonds are often issued by municipalities. The three types of municipal bonds analyzed in this paper are believed to have the highest correlation with funding efforts for eminent domain takings.

Nearly all economic improvement bonds in the sample are issued for the purpose of funding redevelopment plans. The redevelopment plans include projects such as updating dilapidated neighborhoods, modernizing downtown areas, and renewing merchant areas. Table 3.2 shows a few examples of municipal bonds from different states offered with the intentions of economic improvement.

Table 3.2: Economic Improvement Municipal Bonds

CUSIP:	State:	Purpose:
34711GBH	Colorado	Police service building and deicing storage facility
20772F6Y	Connecticut	General capital to the state of CT
07201TXB	California	Funding Redevelopment Agencies
551541AP	Florida	Lynn Haven Industrial Park

³⁷ Municipal Securities Rulemaking Board, <http://emma.msrb.org/EducationCenter/WhatAreBonds.aspx>

199112CU	Georgia	Assorted Reason. See reference in paragraph below
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The municipal bond issued by the city of Fort Collins, Colorado is for the purpose of building a police service building and a deicing storage facility. The municipal bond's official statement says, "The net proceeds of the certificates are to be used by the corporation to acquire from the city fee or leasehold interests in the site, to acquire, construct, and install the improvement on two parcels of the site..."³⁸ This specific municipal bond offering may be used to build a public building, but the surplus is experienced by a corporation. The municipal bond offered by California is for the purpose of funding redevelopment agencies, such as the Claremont Redevelopment Agency and the Redevelopment Agency of the City of Lakeport. The corresponding official statement to the California CUSIP 07201TXB states:

"All power of a redevelopment agency is vested in the members of its Board of Directors, which often is the City Council of the city in which the redevelopment agency was formed. The redevelopment agency exercises governmental function in carrying out projects and has sufficiently broad authority to acquire, develop, administer and sell or lease property, including the right of eminent domain and the right to issue bonds or incur other types of indebtedness and to expend the proceeds. A redevelopment agency can demolish buildings and other improvements and can own or acquire real property and develop the same."³⁹

³⁸ Official Statement, CUSIP: 34711GBH, <http://emma.msrb.org/MS198370-1.pdf>

³⁹ Official Statement, CUSIP 07201TXB, <http://emma.msrb.org/MS204070-1.pdf>, pg. 4.

California is the heaviest user of eminent domain takings and most frequent state exposed in the municipal bond sample. California is guilty of transferring eminent domain authority to private firms in order to carry out economic development takings.

The municipal bond (551541AP) offered by Florida is for the redeveloping a city owned parcel of land to provide a 100,000 square foot manufacturing facility in Lynn Haven Commerce Park.⁴⁰ The municipal bond issued by Georgia is for an assorted number of reasons including, refunding and redeeming a portion of the outstanding Columbus Building Authority Revenue Bonds, cost of acquiring land and or acquiring, installing, and developing certain facilities to be used for government, proprietary, and administrative functions, capitalized interest, and the cost of issuance of new revenue bonds.⁴¹

Municipal bonds issued for the purpose of industrial improvement include projects such as purchasing office space, environmental activist movements, industrial training, and school renovations. Table 3.3 shows a few examples of municipal bonds from different states offered with the intentions of industrial improvement.

Table 3.3: Industrial Improvement Municipal Bonds

CUSIP:	State:	Purpose:
130609AV	California	Acquisition of administrative offices and Clean Air Act
394631AC	North Carolina	Redevelopment of land for International Paper
010608XV	Alabama	Training for Hyundai and Mercedes manufacturing ⁴²
455261UV	Indiana	Park Tudor School renovation ⁴³

⁴⁰ Official Statement, CUSIP 551541AP, <http://emma.msrb.org/MS93763-1.pdf>, pg. 6.

⁴¹ Official Statement, CUSIP 199112CU, <http://emma.msrb.org/MS132070-1.pdf>, pg. 7.

⁴² Official Statement, CUSIP 010608XV, <http://emma.msrb.org/MS176569-1.pdf>, pg. 4.

⁴³ Official Statement, CUSIP 455261UV, <http://emma.msrb.org/MS133950-1.pdf>, pg. 3.

The municipal bond issued by California is for the purpose of acquiring a building in Sacramento to house administrative offices for the District and provide funding for a Clean Air Act.⁴⁴ North Carolina issued CUSIP 394631AC to fund a redevelopment project to replace an old processing plant owned by the city with a new facility operated by International Paper.⁴⁵ The transfer of property would generate more tax revenue for Green County, North Carolina. The use of eminent domain is limited in the majority of the selected industrial improvement municipal bonds.

Municipal bonds issued for the purpose of public improvement include projects such as redevelopment plans, zoos, water treatment plants, sanitation, etc. Table 3.4 shows a few examples of municipal bonds from different states offered with the intentions of public improvement.

Table 3.4: Public Improvement Municipal Bonds

CUSIP:	State:	Purpose:
797300UZ	California	Horton Plaza Redevelopment ⁴⁶
059189BF	Maryland	Assortment of Public Improvements ⁴⁷
877223MC	Michigan	Land Acquisitions ⁴⁸
68607VJU	Oregon	Schools and State Fair ⁴⁹

The use of funding generated by the issuance of California's CUSIP 797300UZ was to provide liquidity in the Horton Plaza redevelopment plan. The capital was used to support the private agency's development needs, including acquisition of property,

⁴⁴ Official Statement, CUSIP 130609AV, <http://emma.msrb.org/MS164666-1.pdf>, pg. 4.

⁴⁵ Official Statement, CUSIP 394631AC, <http://emma.msrb.org/MS171616-1.pdf>, pg. 6.

⁴⁶ Official Statement, CUSIP 797300UZ, <http://emma.msrb.org/MS148676-1.pdf>, pg. 6.

⁴⁷ Official Statement, CUSIP 059189BF, <http://emma.msrb.org/MS144443-1.pdf>, pg. 9-10.

⁴⁸ Official Statement, CUSIP 877223MC, <http://emma.msrb.org/MS163479-1.pdf>, pg. 4.

⁴⁹ Official Statement, CUSIP 68607VJU, <http://emma.msrb.org/MS182936-1.pdf>, pg. 11.

demolishing of older buildings, and refinancing land. Maryland's municipal bond offering included redevelopment projects such as zoos, schools, libraries, office buildings, and sanitation. Eminent domain takings are not present in the official statements for public improvement bond offerings except for California.

California is a regular user of establishing agencies to carry out economic development takings. The power of authority is given to different agencies depending on the specific economic development objective the city has in mind. The money needed to acquire the necessary property is obtained by offering municipal bonds. California uses economic, industrial, and public improvement bonds to find financing for their projects.

STATISTICAL MODELING:

The basic objective of the model is to describe the result of effective legislation on current bid yields of municipal bonds pertaining to economic improvement, industrial improvement, and public improvement. In order to create an efficient method to capture the predicted outcome, a strategic model is constructed. Through a difference-in-difference test, municipal bond yields will be evaluated on several combinations of two static dates. The first date (January 7, 2005) will be before the Kelo case was heard in the United States Supreme Court. The second observed date will be several randomly selected dates after the Kelo decision until July 2008. The analysis is suspended at this limit due to the financial crisis in the markets beginning the summer of 2008, caused by the subprime mortgage meltdown. The difference-in-difference test at two distinct points in time controls for outside factors such as Federal Reserve monetary activity, inflation

adjustments, and international currents. This practice ensures all tested municipal bonds have equivalent exposure to exogenous forces.

The endogenous variable explored in the treatment is the difference between the municipal bond yield after the decision at one of the selected months and the predetermined date before the Kelo hearing. The derivation of the dependent variable is as follows.

Equation 1: $\Delta Y_i = y_{i1} - y_{i0}$

The term y_{i1} is each individual municipal bond's yield at a selected date after the Kelo decision. The term y_{i0} is each individual municipal bond's yield at the fixed date before the initial Kelo hearing.

One independent variable employed in the regression is a binary treatment variable specifying "1" for states with effective post-Kelo legislation and "0" for states with ineffective post-Kelo legislation. Each individual CUSIP will be coded with a "0" or "1" depending on which type of legislation state the bond was issued. The dummy variable representing reform effectiveness will take on two classification systems. The study will be estimated using the Castle Coalition's classification method and Ilya Somin's categorization procedure.

The Kelo dummy variable will be coded "0" starting on 01/07/2005 and continue for each date until the final decision was expressed on 06/23/2005. Every date after the case was closed will receive a "1". The Kelo dummy variable intends to explain the financial effect experienced because of the Kelo decision.

The selected statistical model uses regression analysis to impose the dummy variable for legislature effectiveness, and the dummy variable representing the Kelo decision, on the difference variable. The Ordinary Least Squares regression model exhibits the following functional form when applied to the present scenario:

Equation 2: $\Delta Y_{ijt}^{muni} = \beta_0 + \beta_1 * DV_i^{code} + \beta_2 * DV^{kelo} + U_i$

The β_0 coefficient determines the intercept term when all of the explanatory variables are coded “0”. Parameter estimation explains the impact of the coefficient, β_1 on the change in municipal bond yields over two specified dates. The β_1 term is known as the difference-in-difference estimator. It can be manually calculated by taking the average yields of each classification of legislature strength at the two dates. Equation 2 shows the computation method predicting the difference and difference coefficient.

Equation 3: $\beta_1 = \left[\left(Yield_1^{After} - Yield_0^{After} \right) - \left(Yield_1^{Before} - Yield_0^{Before} \right) \right]$

The term $Yield_1^{After}$ shows the average yields of all municipal bonds issued by a state with effective post-Kelo reform on a selected date after the Kelo decision. The expression $Yield_0^{After}$ explains the mean yields of all municipal bonds issued by a state with ineffective post-Kelo reform on a selected date after the Kelo decision. The term $Yield_1^{Before}$ shows the average yields of all municipal bonds issued by a state with effective post-Kelo reform on the chosen date, 01/07/2005. The expression $Yield_0^{Before}$ shows the average yields of all municipal bonds issued by a state with ineffective post-Kelo reform on the chosen date, 01/07/2005.

The β_2 coefficient shows the effect of the date Kelo was decided on the stream of municipal bond yields. If the coefficient is positive, the dummy variable corresponding to the Kelo decision contributes the observed difference in municipal bond yields. If the β_2 term is negative, the Kelo dummy takes away from divergence in municipal bond yields. The U_i term explains the error in the model not captured by the exogenous variables.

The data will be initially tested using the entire sample of municipal bond yields. A difference-in-difference analysis for the complete sample will be evaluated annually in the month of July after the Kelo decision. After the preliminary study, subsets of the sample will be observed to determine how much impact one category has on the aggregate outcome. The municipal bonds will be separated based on the purpose of the issue. The procedure will generate three subsets in the sample, economic improvement, industrial improvement, and public improvement. Equation 4, 5, and 6 will estimate each of the subsets respectively, economic improvement, industrial improvement, and public improvement.

$$\text{Equation 4: } \Delta Y_{ijt}^{econ} = \beta_0 + \beta_1 * DV_i^{code} + \beta_2 * DV^{kelo} + U_i$$

$$\text{Equation 5: } \Delta Y_{ijt}^{indus} = \beta_0 + \beta_1 * DV_i^{code} + \beta_2 * DV^{kelo} + U_i$$

$$\text{Equation 6: } \Delta Y_{ijt}^{public} = \beta_0 + \beta_1 * DV_i^{code} + \beta_2 * DV^{kelo} + U_i$$

HYPOTHEIS DECLARATION:

The difference-in-difference estimator is the coefficient of interest in the research inquiry. The study is attempting to provide insight on the financial effect on municipal bond yields caused by post-Kelo reform. I aim to show how substantial restrictions on the grasping hand of economic development takings permitted by eminent domain will lead to a significant change in municipal bond yields. The formal hypothesis tested in the analysis is as follows:

Test 1: $H_0: \beta_1 = 0$
 $H_A: \beta_1 > 0$

The municipal bond yields for states that passed effective post-Kelo reform are expected to rise between the measurement dates because of the high cost involved in the acquisition of private property. The increased protection of property rights will drive the price of the bond down and inversely cause the yield to go up. The municipal bond yields for states that passed ineffective post-Kelo reform are projected to fall because the difficulty to seize property is very low. The minimal cost to acquire land under ineffective reform inflates the price of the bond causing the yield to decrease. A one-sided test will be used to explain the difference in the β_1 coefficient because the predicted result will be positive. The null hypothesis states, there is no variation in municipal bond yields due to the type of state legislation passed after the Kelo decision. If the null hypothesis is supported, the strength of reform passed has no explanation power of the fluctuations of municipal bond yields. The alternate hypothesis provides the contrary to the null hypothesis. If the alternate hypothesis is accepted, effective post-Kelo reform actually has a considerable influence on the observed changes in municipal bond yields.

This outcome would be the consequence of strong legislation restricting the use of eminent domain to acquire private property for private use.

The second hypothesis test includes the β_2 coefficient representing the financial impact induced by the Kelo decision. The formal hypothesis test for Kelo dummy variable is as follows:

Test 2: $H_0: \beta_2 = 0$
 $H_A: \beta_2 < 0$

The null hypothesis describes the condition where the Kelo outcome has no influence on municipal bond yields. The alternate hypothesis explains the scenario where the Kelo result decreases the municipal bond yield. If the analysis rejects the null hypothesis in favor of the alternate, the predicted result is confirmed. Since the Kelo decision does not offer any further restrictions on municipalities performing eminent domain takings, the yields should decrease. The price of the bond will rise because private property is easier to take and inversely the yield will diminish. The predicted effect will be a negative sign on the β_2 coefficient.

CHAPTER FOUR

RESULTS

ENTIRE SAMPLE ANALYSIS:

The summary statistics describing the differences on each observed date is offered in Table 4.1.

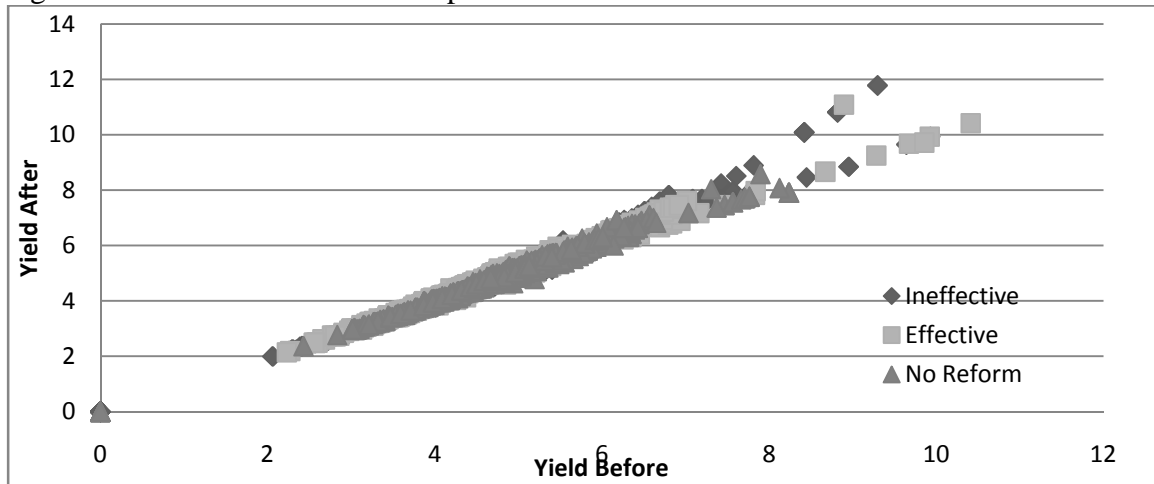
Table 4.1: Summary Statistics

Diff. 07/01/2005	0.0003	0.071	-0.844	(-0.423) – (0.416)
Diff. 07/07/2006	0.1928	0.113	2.228	(-0.140) – (1.332)
Diff. 07/06/2007	0.1798	0.151	3.702	(-0.332) – (2.052)
Diff. 07/04/2008	0.1443	0.181	5.114	(-0.353) – (2.707)

Source: Bloomberg Professional

The results obtained by following the preceding methodology are presented using the Castle Coalition's classification method and Somin's classification system for the entire sample. Figure 4.1 graphically depicts the total sample by displaying the yield before on the y-axis and the yield after on the x-axis.

Figure 4.1: Before and After Comparison



The yields of states that failed to pass legislation after the Kelo decision do not deviate away from an imaginary 45 degree line. The yields of states that passed ineffective legislature tend to show a slight divergence of before and after yields. As predicted, the yields of effective states are apt to be higher after substantial reform has been enacted than before the legislation.

The STATA results will start at the first month prior to the Kelo decision and report annually until the last accounted date of the sample, July 4, 2008. Appendix A and B show the statistical output for the Castle Coalition's classification system and Somin's classification system respectively, derived by regressing the dummy variable for legislature effectiveness, and the dummy variable representing the Kelo decision on the independent variable. Each coefficient in the analysis is listed in table 4.2 below and the standard error is in parenthesis.

Table 4.2: Entire Sample Regression Output

Difference Variable:	β_1 : Diff-in-Diff	B_2 : DV_Kelo
07/01/2005: CC	0.016 (0.002)	-0.047 (0.015)
07/01/2005: Somin	0.015 (0.002)	-0.047 (0.015)
07/07/2006: CC	0.012 (0.003)	-0.058 (0.024)
07/07/2006: Somin	0.010 (0.003)	-0.057 (0.024)
07/06/2007: CC	0.021 (0.005)	-0.089 (0.033)
07/06/2007: Somin	0.019 (0.005)	-0.088 (0.033)
07/04/2008: CC	0.025 (0.006)	-0.120 (0.039)
07/04/2008: Somin	0.024 (0.006)	-0.119 (0.039)

Regardless the classification system applied to the model and at all relevant points in time, the difference-in-difference estimator is significant at the 99% confidence interval. The coefficients range from a maximum of 0.025 to a minimum of 0.012. The difference-in-difference estimator explains how much of the observed difference in municipal bond yields at two points is accounted for by effective state legislature. According to the findings, effective post-Kelo reform contributes up to a 0.025 percentage points in the total variation over time. The adjustment due to legislation with strength may seem small, but when describing yields on municipal bonds, a 0.025 percentage change is economically meaningful.

The dummy variable representing the time at which the Kelo decision was confirmed shows a negative coefficient. The Kelo binary variable shows the effect of the high court's decision on municipal bond yields. According to the results, the Kelo decision is consistent with the predicted results, that Kelo should decrease the yields. This occurrence is due to the confirmation of weak property right protection by the Supreme Court. The court's decision allows municipalities to acquire land at a low marginal cost which inflates the bond's price.

The entire model built on the explanatory variables; dummy variable for legislature effectiveness and the dummy variable representing the Kelo decision only capture a minor portion of the total difference in municipal bond yields. This occurrence is reflected in relatively low adjusted R-squared. The error term U_i retains most of the residual significance not described by the model. Even though a low adjusted R-squared

is present, the objective of the analysis, discover the effects of effective post-Kelo reform, was accomplished.

ANALYSIS OF SAMPLE SUBSETS:

An investigation of three subsets within the sample will be tested to determine if any one factor is responsible for driving the results in the entire model. The three subsets examined pertain to the purpose or reason why the municipality issued the bond. The divisions are economic improvement, industrial improvement, and public improvement. Appendix C shows the results of the regression analysis for municipal bonds offered for the purpose of economic improvement. Appendix D shows the results of the regression analysis for municipal bonds offered for the purpose of industrial improvement. Appendix E shows the results of the regression analysis for municipal bonds offered for the purpose of public improvement. Table 4.3 shows the regression coefficients for each subset. Each coefficient in the analysis is listed below and the standard error is in parenthesis.

Table 4.3: Subset Regression Output

Difference Variable:	β_1 : Diff-in-Diff	B_2 : DV_Kelo
07/07/2006: CC: Econ Imprv.	0.026 (0.004)	-0.068 (0.021)
07/07/2006: Somin: Econ Imprv.	0.025 (0.004)	-0.068 (0.021)
07/04/2008: CC: Econ Imprv.	0.041 (0.005)	-0.142 (0.028)
07/04/2008: Somin: Econ Imprv.	0.041 (0.005)	-0.142 (0.028)
07/07/2006: CC: Ind Imprv.	-0.036 (0.106)	0.110 (0.034)
07/07/2006: Somin: Ind Imprv.	-0.036 (0.010)	0.110 (0.034)
07/04/2008: CC: Ind Imprv.	-0.033 (0.020)	0.126 (0.066)
07/04/2008: Somin: Ind Imprv.	-0.033	0.126

	(0.020)	(0.066)
07/07/2006: CC: Pub Imprv.	0.000	-0.006
	(0.009)	(0.021)
07/07/2006: Somin: Pub Imprv.	-0.006	-0.003
	(0.010)	(0.021)
07/04/2008: CC: Pub Imprv.	-0.031	-0.003
	(0.012)	(0.028)
07/04/2008: Somin: Pub Imprv.	-0.044	0.000
	(0.012)	(0.027)

The estimation of all three subsets enlightens the driving force behind the coefficient of interest. The difference-in-difference estimator for municipal bonds issued for the purpose of economic improvement explains more than 0.04 percentage points of the change in yields over the time series. The coefficient standing for state legislature effectiveness for economic improvement inundates the state legislature effectiveness coefficients regarding industrial and public improvements.

The dummy variable representing the time at which the Kelo outcome became public information displays results almost consistent with the entire sample. Municipal bonds offered for the purpose of economic improvement displays negative coefficients. The coefficients for industrial improvements and public improvements are positive, but they are insignificant.

HYPOTHESIS RULING:

Based on the analysis, the null hypothesis for test 1, there is no variation in municipal bond yields due to the type of state legislation passed after the Kelo decision, is rejected at a 0.01 level of significance. The alternate hypothesis, there is a positive change in municipal bond yields due to the strength of state legislation passed after Kelo,

is confirmed by the results in the study. States that passed effective statutes post-Kelo actually make a difference in the yields realized by investors of municipal bonds. Strong restrictions against eminent domain takings make it harder for municipalities to take private property, which decreases the price of a municipal bond. Inversely a decrease in the price of a municipal bond will lead to increase in the yield.

Hypothesis test 2 offers results that confirm the predicted outcome of the impact of the Kelo decision on municipal bond yields. The negative coefficient on β_2 provides insight on the increased incentive of municipalities to perform takings because the Supreme Court was not willing to set a meaningful restriction. The less cost involved in the takings process, the more willing municipalities are to perform takings, and the higher the price of municipal bonds.

CHAPTER FIVE:

DISCUSSION

Epstein brings up the question, “What minimum of additional power must be added for the state to become more than a voluntary protective association and to acquire the exclusive use of force with its territory?”⁵⁰ His concise answer summarizes all literature dealing with eminent domain and government intervention with one response, “the only additional power needed is the state’s right to force exchanges of property rights that leave individuals with rights more valuable than those they have been deprived of.”⁵¹ He goes on to express the limitations of eminent domain that are necessary for the state to be in compliance with its regulatory duties to its citizens. The state may utilize eminent domain for only the reason of public use, negating any private-to-private transfers. Also each citizens affected by eminent domain takings must receive an efficient outcome through just compensation.

The U.S. Supreme Court has deviated away from the intended meaning of the takings clause in the Fifth Amendment. By neglecting to enforce restrictions on the power of the state, the legal system has failed to protect individual’s private property rights. The federal judicial deference to the state’s reasoning ability is a complete failure to the entire property rights system. Allowing states to determine the necessary allocation of property will almost always result in inefficient outcomes. *Kelo* is a prime example of eminent domain abuse by the state and it demonstrates an inefficient allocation of rights. The city of New London completely disregarded every constitutional

⁵⁰ Richard Epstein, *Takings: Private Property and the Power of Eminent Domain*, 1985, pg. 332

⁵¹ Richard Epstein, *Takings: Private Property and the Power of Eminent Domain*, 1985, pg. 332

constraint on the state and initiated a redevelopment plan promoting a one-sided gain. The true cost was placed on the displaced residents of Fort Trumbull and the “public benefit” was redistributed among developers, corporations, and government entities. This outcome is not consistent with the actual purpose of the state. The explanation is bolstered by the negative coefficient of β_2 found in the study. The Kelo result offered by the high court provides no additional protection of private property rights. The case gives municipalities more incentive to transfer private property for private gain because the Supreme Court makes it easier to get away with takings.

Effective state legislation induced by Kelo has been a hopeful step in the right direction for the protection of individual’s property rights. Ineffective state reform containing loopholes such as broad definitions of blight and limited areas still eligible for takings has not contributed any meaningful reassurance to the problem at hand. Only legislation with strength against unjust takings deserves merit.

The purpose of the study was to supplement the existing literature pertaining to eminent domain by using a novel approach. Yields on municipal bonds issued for the reasons of economic improvement, industrial improvement, and public improvement were analyzed to expand on the consequences of effective vs. ineffective post-Kelo reform. The research inquiry started with an investigation of the reasons why a state would be inclined to seize a citizen’s private property and transfer the rights of ownership to another private party. The gain realized by the breach of duties by the state would have to exceed the loss incurred from public distrust. New London was faced with the moral decision, to maintain social equilibrium and continue to protect the rights of its

taxpaying citizens or deviate away from its obligation and pursue selfish endeavors at the cost of its citizens. The potential gains, in the form of tax revenue to the state from the transfer of wealth, surpassed the state's social commitment to be an advocate of individual's property rights.

After establishing government motives to act unconstitutionally, a further examination about funding ensued. In order to pay fair market value or "just compensation" to each person forced to surrender their rights, capital has to be generated. Municipalities issue bonds with a specific purpose in mind to create liquidity. The capital raised by debt instruments is used to justly compensate individuals for relinquishing their property for economic development. Municipal bonds offered by financially stable cities are presumed to be sound investments with the potential for solid growth and low probability of default. Municipal bonds offered by financially unsteady cities possess the characteristics of being risky investments and having questionable growth estimates. A bond issued by a municipality within a state that diligently protects the property rights of its citizen, should have a higher return over the term compared to a bond offered by a municipality within a state that fails to pass effective eminent domain legislation. In order to entice prospective investors, weak legislation states offer high coupon payments to offset the low returns. The average coupon payment for ineffective eminent domain legislation states is 4.76 and the average coupon payment for states passing effective post-Kelo reform is 4.67.

Kelo left its unpleasant impression on the legal system as well as every property owner throughout the United States. The analysis of municipal bond yields in the study

offers further insight on the consequences Kelo prompted. The results discovered in the model supports the importance of valuable eminent domain legislation. Effective state legislation explains up to 0.02 percentage points of the difference in municipal bond yields observed after Kelo. States enacting strong post-Kelo reform are commended for their efforts to maintain social order, promote equality among citizens, and fulfill the obligations of the state. These states should serve as models of social efficiency and judicial reverence for states continuing to practice unconstitutionally.

APPENDICES

Appendix A

Castle Coalition Classification:

07/01/2005:

Source	SS	df	MS			
Model	.264305888	2	.132152944			
Residual	22.4085834	4400	.00509286			
Total	22.6728893	4402	.005150588			

Number of obs =	4403
F(2, 4400) =	25.95
Prob > F =	0.0000
R-squared =	0.0117
Adj R-squared =	0.0112
Root MSE =	.07136

diff07012005	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_CC	.016098	.002422	6.65	0.000	.0113497	.0208463
dv_kelo	-.047754	.0156242	-3.06	0.002	-.0783852	-.0171228
_cons	.0428571	.015573	2.75	0.006	.0123263	.073388

07/07/2006:

Source	SS	df	MS			
Model	.194656031	2	.097328015			
Residual	56.2629317	4400	.01278703			
Total	56.4575878	4402	.01282544			

Number of obs =	4403
F(2, 4400) =	7.61
Prob > F =	0.0005
R-squared =	0.0034
Adj R-squared =	0.0030
Root MSE =	.11308

diff07072006	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_CC	.0123269	.0038377	3.21	0.001	.004803	.0198507
dv_kelo	-.058142	.0247571	-2.35	0.019	-.1066785	-.0096056
_cons	.247381	.024676	10.03	0.000	.1990035	.2957584

07/06/2007:

Source	SS	df	MS			
Model	.563868473	2	.281934236			
Residual	100.294263	4400	.022794151			
Total	100.858132	4402	.022911888			

Number of obs =	4403
F(2, 4400) =	12.37
Prob > F =	0.0000
R-squared =	0.0056
Adj R-squared =	0.0051
Root MSE =	.15098

diff07062007	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_CC	.0219451	.0051239	4.28	0.000	.0118997	.0319905
dv_kelo	-.0894842	.0330543	-2.71	0.007	-.1542872	-.0246812
_cons	.2629524	.032946	7.98	0.000	.1983617	.327543

07/04/2008:

Source	SS	df	MS			
Model	.845607735	2	.422803868			
Residual	144.574434	4400	.032857826			
Total	145.420041	4402	.033034994			

Number of obs =	4403
F(2, 4400) =	12.87
Prob > F =	0.0000
R-squared =	0.0058
Adj R-squared =	0.0054
Root MSE =	.18127

diff07042008	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_CC	.0257676	.0061519	4.19	0.000	.0137068	.0378284
dv_kelo	-.1204958	.0396858	-3.04	0.002	-.1982999	-.0426916
_cons	.2573333	.0395558	6.51	0.000	.1797841	.3348825

Appendix B

Somin Classification:

07/01/2005:

Source	SS	df	MS	Number of obs = 4403		
Model	.238447406	2	.119223703	F(2, 4400) = 23.38		
Residual	22.4344419	4400	.005098737	Prob > F = 0.0000		
				R-squared = 0.0105		
				Adj R-squared = 0.0101		
Total	22.6728893	4402	.005150588	Root MSE = .07141		

diff07012005	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_S	.015284	.0024457	6.25	0.000	.0104893	.0200787
dv_kelo	-.0474138	.0156326	-3.03	0.002	-.0780616	-.016766
_cons	.0428571	.0155819	2.75	0.006	.0123087	.0734056

07/07/2006:

Source	SS	df	MS	Number of obs = 4403		
Model	.163286859	2	.081643429	F(2, 4400) = 6.38		
Residual	56.2943009	4400	.012794159	Prob > F = 0.0017		
				R-squared = 0.0029		
				Adj R-squared = 0.0024		
Total	56.4575878	4402	.01282544	Root MSE = .11311		

diff07072006	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_S	.010861	.0038741	2.80	0.005	.0032658	.0184561
dv_kelo	-.0576586	.0247632	-2.33	0.020	-.1062069	-.0091103
_cons	.247381	.0246829	10.02	0.000	.19899	.2957719

07/06/2007:

Source	SS	df	MS	Number of obs = 4403		
Model	.482062321	2	.24103116	F(2, 4400) = 10.57		
Residual	100.376069	4400	.022812743	Prob > F = 0.0000		
				R-squared = 0.0048		
				Adj R-squared = 0.0043		
Total	100.858132	4402	.022911888	Root MSE = .15104		

diff07062007	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_S	.0198625	.0051731	3.84	0.000	.0097206	.0300044
dv_kelo	-.0887631	.0330666	-2.68	0.007	-.1535903	-.023936
_cons	.2629524	.0329594	7.98	0.000	.1983354	.3275694

07/04/2008:

Source	SS	df	MS	Number of obs = 4403		
Model	.78492799	2	.392463995	F(2, 4400) = 11.94		
Residual	144.635113	4400	.032871617	Prob > F = 0.0000		
				R-squared = 0.0054		
				Adj R-squared = 0.0049		
Total	145.420041	4402	.033034994	Root MSE = .18131		

diff07042008	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_S	.0245979	.0062098	3.96	0.000	.0124236	.0367722
dv_kelo	-.1199865	.0396927	-3.02	0.003	-.1978042	-.0421687
_cons	.2573333	.0395641	6.50	0.000	.1797679	.3348988

Appendix C

Economic Improvement:

Castle Coalition : 07/07/2006

Source	SS	df	MS	Number of obs = 3064		
Model	.456173632	2	.228086816	F(2, 3061) =	24.48	
Residual	28.5158903	3061	.009315874	Prob > F =	0.0000	
				R-squared =	0.0157	
				Adj R-squared =	0.0151	
Total	28.9720639	3063	.009458721	Root MSE =	.09652	

diff07072006	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_CC	.0265389	.0041872	6.34	0.000	.0183289	.0347488
dv_kelo	-.0686618	.0211557	-3.25	0.001	-.1101427	-.0271809
_cons	.247381	.0210621	11.75	0.000	.2060836	.2886783

Somin : 07/07/2006

Source	SS	df	MS	Number of obs = 3064		
Model	.430729712	2	.215364856	F(2, 3061) =	23.10	
Residual	28.5413342	3061	.009324186	Prob > F =	0.0000	
				R-squared =	0.0149	
				Adj R-squared =	0.0142	
Total	28.9720639	3063	.009458721	Root MSE =	.09656	

diff07072006	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_S	.0259493	.0042428	6.12	0.000	.0176304	.0342683
dv_kelo	-.0683243	.0211642	-3.23	0.001	-.1098218	-.0268267
_cons	.247381	.0210715	11.74	0.000	.2060652	.2886967

Castle Coalition : 07/04/2008

Source	SS	df	MS	Number of obs = 3064		
Model	1.29571686	2	.64785843	F(2, 3061) =	38.38	
Residual	51.6739846	3061	.016881406	Prob > F =	0.0000	
				R-squared =	0.0245	
				Adj R-squared =	0.0238	
Total	52.9697015	3063	.017293406	Root MSE =	.12993	

diff07042008	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_CC	.0417238	.0056366	7.40	0.000	.030672	.0527756
dv_kelo	-.1427262	.0284787	-5.01	0.000	-.1985656	-.0868868
_cons	.2573333	.0283527	9.08	0.000	.201741	.3129256

Somin : 07/04/2008

Source	SS	df	MS	Number of obs = 3064		
Model	1.27512443	2	.637562214	F(2, 3061) =	37.75	
Residual	51.694577	3061	.016888134	Prob > F =	0.0000	
				R-squared =	0.0241	
				Adj R-squared =	0.0234	
Total	52.9697015	3063	.017293406	Root MSE =	.12995	

diff07042008	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_S	.0417857	.00571	7.32	0.000	.03059	.0529815
dv_kelo	-.1424106	.0284831	-5.00	0.000	-.1982586	-.0865626
_cons	.2573333	.0283584	9.07	0.000	.20173	.3129367

Appendix D

Industrial Improvement:

Castle Coalition: 07/07/2006

Source	SS	df	MS	Number of obs = 921		
Model	.46848253	2	.234241265	F(2, 918) = 9.51		
Residual	22.6015113	918	.024620383	Prob > F = 0.0001		
				R-squared = 0.0203		
				Adj R-squared = 0.0182		
Total	23.0699938	920	.02507608	Root MSE = .15691		

dif~07072006	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_CC	-.0360068	.0106863	-3.37	0.001	-.0569792	-.0150344
dv_kelo	.1102825	.0348973	3.16	0.002	.0417947	.1787704
_cons	.1162857	.0342403	3.40	0.001	.0490873	.1834841

Somin: 07/07/2006

Source	SS	df	MS	Number of obs = 921		
Model	.4759961	2	.23799805	F(2, 918) = 9.67		
Residual	22.5939977	918	.024612198	Prob > F = 0.0001		
				R-squared = 0.0206		
				Adj R-squared = 0.0185		
Total	23.0699938	920	.02507608	Root MSE = .15688		

dif~07072006	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_S	-.0365404	.0107	-3.41	0.001	-.0575397	-.0155411
dv_kelo	.110373	.034888	3.16	0.002	.0419036	.1788424
_cons	.1162857	.0342346	3.40	0.001	.0490985	.1834729

Castle Coalition: 07/04/2008

Source	SS	df	MS	Number of obs = 921		
Model	.505464928	2	.252732464	F(2, 918) = 2.85		
Residual	81.3242208	918	.088588476	Prob > F = 0.0582		
				R-squared = 0.0062		
				Adj R-squared = 0.0040		
Total	81.8296857	920	.088945311	Root MSE = .29764		

dif~07042008	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_CC	-.0333853	.0202707	-1.65	0.100	-.0731676	.006397
dv_kelo	.1269533	.0661963	1.92	0.055	-.0029603	.2568669
_cons	.0886667	.06495	1.37	0.173	-.038801	.2161343

Somin: 07/04/2008

Source	SS	df	MS	Number of obs = 921		
Model	.505023313	2	.252511657	F(2, 918) = 2.85		
Residual	81.3246624	918	.088588957	Prob > F = 0.0583		
				R-squared = 0.0062		
				Adj R-squared = 0.0040		
Total	81.8296857	920	.088945311	Root MSE = .29764		

dif~07042008	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_S	-.0334029	.0203001	-1.65	0.100	-.073243	.0064371
dv_kelo	.1268489	.0661897	1.92	0.056	-.0030517	.2567495
_cons	.0886667	.0649501	1.37	0.173	-.0388013	.2161347

Appendix E

Public Improvement:

Castle Coalition: 07/07/2006

Source	SS	df	MS	Number of obs = 416		
Model	.000733844	2	.000366922	F(2, 413)	=	0.04
Residual	3.77070867	413	.009130045	Prob > F	=	0.9606
				R-squared	=	0.0002
				Adj R-squared	=	-0.0046
Total	3.77144252	415	.009087813	Root MSE	=	.09555

dif~07072006	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_CC	.0005166	.009946	0.05	0.959	-.0190345	.0200678
dv_kelo	-.0061561	.0217159	-0.28	0.777	-.0488435	.0365313
_cons	.2175714	.020851	10.43	0.000	.1765841	.2585587

Somin: 07/07/2006

Source	SS	df	MS	Number of obs = 417		
Model	.004676362	2	.002338181	F(2, 414)	=	0.26
Residual	3.77024957	414	.009106883	Prob > F	=	0.7737
				R-squared	=	0.0012
				Adj R-squared	=	-0.0036
Total	3.77492593	416	.009074341	Root MSE	=	.09543

dif~07072006	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_S	-.0066393	.010015	-0.66	0.508	-.026326	.0130474
dv_kelo	-.0034499	.021665	-0.16	0.874	-.0460371	.0391374
_cons	.2175714	.0208245	10.45	0.000	.1766364	.2585064

Castle Coalition: 07/04/2008

Source	SS	df	MS	Number of obs = 416		
Model	.097475026	2	.048737513	F(2, 413)	=	3.17
Residual	6.35254253	413	.015381459	Prob > F	=	0.0431
				R-squared	=	0.0151
				Adj R-squared	=	0.0103
Total	6.45001756	415	.015542211	Root MSE	=	.12402

dif~07042008	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_CC	-.0317582	.0129096	-2.46	0.014	-.0571349	-.0063815
dv_kelo	-.0030173	.0281864	-0.11	0.915	-.058424	.0523894
_cons	.1794286	.0270638	6.63	0.000	.1262286	.2326286

Somin: 07/04/2008

Source	SS	df	MS	Number of obs = 417		
Model	.184047169	2	.092023585	F(2, 414)	=	6.07
Residual	6.27375587	414	.015154	Prob > F	=	0.0025
				R-squared	=	0.0285
				Adj R-squared	=	0.0238
Total	6.45780304	416	.015523565	Root MSE	=	.1231

dif~07042008	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dv_class_S	-.0444663	.0129191	-3.44	0.001	-.0698615	-.0190712
dv_kelo	.0007754	.0279472	0.03	0.978	-.0541608	.0557115
_cons	.1794286	.026863	6.68	0.000	.1266238	.2322334

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